

WHAT IS CLAIMED IS:

1. A method for manufacturing a semiconductor device comprising:

the first step of forming a nitrogen-containing oxide film on a substrate as a gate insulating film;

the second step of annealing said gate insulating film in an atmosphere containing oxygen;

the third step of annealing said gate insulating film in an oxygen-free, inert atmosphere; and

the fourth step of forming an electrode film in said gate insulating film which has been annealed twice.

2. The method according to claim 1, wherein the atmosphere containing oxygen in said second step consists of a atmosphere of a pressure-reduced oxygen gas or an atmosphere of a mixed gas of oxygen gas and an inert gas.

3. The method according to claim 1, wherein said third step is carried out at a temperature ranging from 900°C to 1200°C.

4. The method according to claim 1, wherein said second and third steps are carried out in this or reversed order.